International Well Control Forum

Level 5 Syllabus Guidance Notes

Version 1.0

31 January 2017

1. Section 1 - Overview

1.1. Introduction

IWCF Well Control Level 5 course syllabus aims to meet the recommendations for enhancements to well control training, examination and certification produced by the International Association of Oil and Gas Producers (IOGP) in report number 476 issued in August 2016.

1.2. Who takes the Level 5 course?

The IWCF Well Control Level 5 course is aimed at experienced and knowledgeable candidates who play a critical role in well design and the approval of well designs. The course programme must recognize the impact that design, planning and programming of well operations can have on well integrity assurance throughout the life cycle of the well. Key engineering and technical authority positions in drilling or well intervention operations who already hold a Level 4 certification are strongly encouraged to attend an IWCF Well Control Level 5 course.

Candidates must already have basic well design and/or well intervention knowledge gained through a combination of formal training and work experience documented by certificates.

1.3. How long is the course?

IWCF stipulate the course must be a minimum of 32 hours duration including classroom training, practical exercises and case studies but excluding the written assessment and a mandatory case study project report. Modular programmes will also be acceptable if they together meet the required minimum course duration.

The assessed case study project can be initiated during the training course but candidates are expected to complete the project report in their own time and submit this within 14 days of completing the written assessment.

1.4. How many candidates can a Centre have on a course?

Maximum allowable class size will be as per IWCF rules but at no time must the class exceed 12 candidates.

2. Section 2 - The Level 5 syllabus explained

2.1. Testing understanding

At Level 5, IWCF expects candidates' knowledge and understanding of well control to be developed so that they can "*competently perform their assigned well control duties*". **It is insufficient for candidates on any level of course to be simply coached to pass an exam.**

> *"The quality of teaching must evolve to ensure learning objectives are met. Training must be taught in line with the stipulated syllabus and it shall not be sufficient to base training in "test-similar" or "test-identical" exam questions to help personnel pass the written exam".* (OGP Report 476, October 2012)

2.2. Structure of the written test syllabus

2.2.1. Learning objectives (formerly "standards")

The learning objectives in the syllabus are based on the skills and knowledge required for this level. The use of the wording "learning objective" is in line with the IOGP Report 476. It is a broad overview statement of what the student will be taught during the course.

Demonstrated by the following simple example:

During the course students will gain an understanding of …… how to drive a car.

2.2.2. Learning outcome (formerly "performance criteria")

Learning outcomes must be developed for each of the learning objectives contained in the syllabus. The outcome indicate how each learning objective will be fulfilled with a detailed description of what a student will be able to do at the end of the course. These learning outcomes are the basis on which written test questions are developed.

Demonstrated by the following simple example:

By the end of the course students will be able to ……drive a car including:

- Reversing round a corner
- Parking

At level 5 the student must strive to achieve the following learning outcomes:

- An in-depth understanding of the problem areas and solutions related to well control management
- Comprehensively know the well control risks and contingency planning during the well design and subsequent operations
- Clearly understand the importance of well integrity throughout the well life cycle

2.2.3. Syllabus division

The syllabus is divided into sections and should be categorized in line with IOGP 476 Appendix C and additional specific content identified in section 10 of the IWCF Level 5 programme guidance notes.

2.2.4. Levels

All learning outcomes have been given an equal “weighting”.

2.2.5. Assessment method

The Level 5 course is based on:

- written assessment.
- case study project report

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Syllabus Category	Learning objective. The student will gain an understanding of:	Learning outcome. The student will be able to:

Category: Geological Concepts

Sub Category: Rock & Wellbore stress domains

Sub Category: FIT vs LOT

Syllabus Category	Learning objective. The student will gain an understanding of:	Learning outcome. The student will be able to:

Sub Category: Limitations of MAASP

Sub Category: Zonal isolation

Syllabus Category	Learning objective. The student will gain an understanding of:	Learning outcome. The student will be able to:

Category: Holistic Design for Well Control

Sub Category: Casing load cases

Sub Category: Regulatory requirements

Syllabus Category	Learning objective. The student will gain an understanding of:	Learning outcome. The student will be able to:

Sub Category: Plug, abandon & suspension considerations

Sub Category: Material selection

Syllabus Category	Learning objective. The student will gain an understanding of:	Learning outcome. The student will be able to:

Sub Category: Managing risk and uncertainty

Sub Category: Shallow gas

Syllabus Category	Learning objective. The student will gain an understanding of:	Learning outcome. The student will be able to:

Category: Barrier Integrity Assurance

Sub Category: Barrier implications to well design

Sub Category: Annular cement integrity

Syllabus Category	Learning objective. The student will gain an understanding of:	Learning outcome. The student will be able to:

Sub Category: Barrier verification techniques

Sub Category: Well integrity monitoring

Syllabus Category	Learning objective. The student will gain an understanding of:	Learning outcome. The student will be able to:

Sub Category: Well maintenance

Sub Category: Managing failed integrity

Syllabus Category	Learning objective. The student will gain an understanding of:	Learning outcome. The student will be able to:

Category: Tertiary Well Control

Sub Category: Relief well drilling

Sub Category: Capping

Syllabus Category	Learning objective. The student will gain an understanding of:	Learning outcome. The student will be able to:

Sub Category: Containment

Sub Category: Clean up
